Charles Dickson Archibald, Esq., and William Robert Grove, Esq., were balloted for, and duly elected Fellows of the Society.

The following papers were read:—

1.—Description of a Percussion Shell to explode at the bottom of the Sea. By Captain J. Norton. Communicated by S. Hunter Christie, Esq., M.A., Sec. R.S., &c.

An iron tube, like the barrel of a musket, is screwed into a shell of any size, water-tight. A rod of iron, about half a pound in weight and a foot in length, is suspended within the tube, by means of a split quill passing through a hole in the upper end of the rod, the other end being armed with a percussion-cap. The mouth of the tube is closed with a screw lid also water-tight. Tin or brass wings being attached to the upper end of the tube will keep it in a vertical position during its descent to the bottom of the sea; and the shock on its striking the bottom will cause the bar of iron within the tube to fall, and produce the percussion and explosion.

Should it be found difficult to make the shell water-proof, I am satisfied that percussion powder made from silver will explode by friction or percussion even when *mixed with water*.

2.—Memorandum addressed to the Royal Society. By T. Wharton Jones, F.R.S.

The following is the memorandum in the words of the author:—

On the 18th of June, 1835, a memoir, entitled, "On the Ova of Man and Mammiferous Animals, as they exist in the Ovaries before Impregnation, and on the discovery in them of a Vesicle analogous to that described by Professor Purkinje in the Immature Egg of the Bird," was laid before the Royal Society.

At the time I wrote, I believed myself the first who had observed the vesicle alluded to; but by a reference to the manuscript in the archives of the Society, it will be seen, from a postscript, that before sending it to be communicated, I had become aware that M. Coste of Paris had some time before announced that he had made a similar observation, as far as concerns the rabbit. Those who are conversant in such matters are doubtless aware that I was anticipated also by Professor Valentin; but of this circumstance I was not informed till some considerable time after.

It thus appears that, though I was an independent discoverer of the germinal vesicle of the mammiferous ovum, all the share in the discovery I can lay claim to *historically* is that of being the first who pointed it out in this country.

There is one point, however, in the anatomy of the germinal vesicle of the mammiferous ovum of which I feel myself entitled to be recognized, especially by the Royal Society, as contemporaneous discoverer, and that is, the spot on the side of the vesicle. Feeling this, and having heard at the last meeting of the Royal Society the discovery of this spot attributed solely to the distinguished German

physiologist, Professor Rudolph Wagner, I consider it due to the Royal Society and to myself to call to the Society's remembrance the fact, that, in the memoir above referred to as having been laid before them in 1835, the spot in question is not only pointed out and particularly delineated, but its physiological importance hinted at.

The laying of a paper before a Society is an act of publication. With the communication of my paper to the Royal Society in 1835, the publication of Professor Wagner's paper in Müller's Archiv was *contemporaneous* merely.

It is true, that though Professor Wagner's observations were only first published in Müller's Archiv for 1835, there is a note by the editor, saying that the paper was received by him in 1834; but it is also true,—and of this, were it necessary, proof could be easily adduced,—that my paper was written also in 1834.

In conclusion, I beg to apologize to the Royal Society for obtruding on their notice what may appear matter rather of personal than general interest.

3.—Description of the Electro-magnetic Clock. By C. Wheatstone, Esq., F.R.S.

The object of the apparatus forming the subject of this communication, is stated by the author to be that of enabling a single clock to indicate exactly the same time in as many different places, distant from each other, as may be required. Thus, in an astronomical observatory, every room may be furnished with an instrument, simple in its construction, and therefore little liable to derangement, and of trifling cost, which shall indicate the time, and beat dead seconds audibly, with the same precision as the standard astronomical clock with which it is connected; thus obviating the necessity of having several clocks, and diminishing the trouble of winding up and regulating them separately. In like manner, in public offices and large establishments, one good clock will serve the purpose of indicating the precise time in every part of the building where it may be required, and an accuracy ensured which it would be difficult to obtain by independent clocks, even putting the difference of cost out of consideration. Other cases in which the invention might be advantageously employed were also mentioned. In the electro-magnetic clock, which was exhibited in action in the Apartments of the Society, all the parts employed in a clock for maintaining and regulating the power are entirely dispensed with. It consists simply of a face with its second, minute and hour hands, and of a train of wheels which communicate motion from the arbor of the second's hand to that of the hour hand, in the same manner as in an ordinary clock train; a small electro-magnet is caused to act upon a peculiarly constructed wheel (scarcely capable of being described without a figure) placed on the second's arbor, in such manner that whenever the temporary magnetism is either produced or destroyed, the wheel, and consequently the second's hand, advances a sixtieth part of its revolution. It is obvious, then, that if an electric current can be alternately established and arrested, each resumption and cessation